UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,370	11/16/2001	Paul England	MS1-953US	5758

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EXAMINER
DINH, MINH

ART UNIT	PAPER NUMBER
2132	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/993,370	ENGLAND ET AL.
	Examiner	Art Unit
	Minh Dinh	2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 July 2005_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-16_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-16_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _16 November 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _12/18/03, 2/6/04_.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-16 have been examined.

Specification

2.   The disclosure is objected to because of the following informalities: "export

statement list portion 758" (Specification, page 49, lines 2 and 4). The reference

number for the export statement list should be "458" (figure 12).

Appropriate correction is required.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.   Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Claims 1-16 are not limited to tangible

embodiments. In view of applicant's disclosure, specification page 64, line 16 – page

65, line 13, the computer readable medium is not limited to tangible embodiments,

instead being defined as including both tangible embodiments (e.g., RAM, ROM, CD-

ROM) and intangible embodiments (e.g., transmission medium such as a

communications network). As such, the claim is not limited to statutory subject matter

and is therefore non-statutory.

5.   Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. The claimed data structure contains only data

that does not provide functionality. Since there is no functional descriptive language

recited in the claims, the data structure is considered "nonfunctional descriptive

material" and, therefore, the claims are nonstatutory.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

7.   Claims 1, 3, 5, 7, 12 and 14 are rejected under 35 U.S.C. 102(b) as being

anticipated by Fischer (5,412,717).

Fischer discloses a program authorization information (PAI) data structure used

to verify that an application is a trusted application (i.e., comes from a trusted source

and has not been tampered with) allowed to execute on a computer system (Abstract;

col. 2, lines 56-64).

Regarding claims 1 and 5, Fischer discloses that the PAI comprises a unique

identifier of the trusted application (fig. 1, element 28), a certificate that certifies the

public key corresponding to the private key used to sign the binary of the application

allowed to execute (fig. 1, element 48), and a digital signature generated using the

unique identifier and the certificate (fig. 1, element 40).

Regarding claim 3, Fischer further discloses that the certificate comprises a

signed hash value of the certificate itself (col. 2, line 65 – col. 3, line 1).

Regarding claim 7, Fischer further discloses that the certificate comprises the

public key corresponding to the private key for signing the binary (fig. 1, element 48).

Regarding claim 12, Fischer further discloses data representing a set or

properties corresponding to the PAI (fig. 1, element 34).

Regarding claim 14, Fischer further discloses that the set of properties include

whether the trusted application can invoke another application and thus allowing an

additional binary to be added to the process space after the trusted application begins

executing (col. 11, line 65 – col. 12, line 9).

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer

('717) as applied to claim 1 above, and further in view of Fischer (5,390,247). Fischer

('717) discloses a public key of a public-private key pair of the party that generates the

PAI and the identifier of the party that generates the PAI (fig. 1, elements 40 and 48).

Fischer ('717) does not disclose a version number of the PAI. Fischer ('247) discloses

an API having a version number (fig. 2, element 20; col. 7, lines 30-38). It would have

been obvious to one of ordinary skill in the art at the time the invention was made to

modify the Fischer ('717) PAI such that it includes a version number, as taught by

Fischer ('247), in order to identify the version of the interpreter that can process the PAI.

10.   Claims 4, 6, 8 and 13 is rejected under 35 U.S.C. 103(a) as being unpatentable

over Fischer as applied to claims 3, 5, 7 and 12 above, and further in view of Atkinson

et al (5,892,904).

Regarding claim 4, 6 and 8, Fischer does not disclose that the PAI includes a

certificate revocation list. Atkinson discloses a data structure used to validate an

application and that the data structure includes certificate revocation lists (col. 20, lines

25-35). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the Fischer ('717) PAI to includes a certificate revocation

list, as taught by Atkinson, so that revoked certificates could be identified. Accordingly,

a revoked certificate cannot be used to verify the signed binary.

Regarding claim 13, Fischer does not disclose debug information. Atkinson

discloses a data structure used to validate an application, the data structure comprising

debug information (Abstract; col. 17, lines 42-50). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify the Fischer ('717)

PAI such that it includes debug information, as taught by Atkinson. Debug information is advisory to debuggers.

11.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer as applied to claim 1 above, and further in view of Arnold (6,175,924). Fischer does not disclose that the PAI includes an export statement that allows a secret associated with the application to be exported to another application. Arnold discloses a data structure used to validate an application and that the data structure including an export statement that allows protected data associated with the application to be exported to another application (figures 3-4; col. 6, lines 19-56), the protected data meets the limitation of a secret. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Fischer PAI such that it includes an export statement that allows a secret associated with the application to be exported to another application, as taught by Arnold, so that protected data associated with one application could be accessed by other applications of the same family.

12.   Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer ('717) as applied to claims 1 and 12 above, and further in view of Fischer (6,105,072).

Regarding claim 15, Fischer ('717) does not disclose a property allowing implicit upgrade to a higher version number. Fischer ('072) discloses a property allowing implicit upgrading a data structure used to validate an application to a higher version

number (fig. 11B; col. 5, lines 38-43; col. 31, lines 38-47). It would have been obvious

to one of ordinary skill in the art at the time the invention was made to modify the

Fischer ('717) PAI such that it includes a property allowing implicit upgrade to a higher

version number, as taught by Fischer ('072). The motivation for doing so would have

been to allow upward compatibility without sacrificing integrity.

Regarding claim 16, Fischer ('717) does not disclose a list of entry points into the

executing trusted application. Fischer ('072) discloses a list of methods and their

starting object code offset (fig. 5, element 56; fig. 11A, element 135) which meets the

limitation of a list of entry points into the executing trusted application. It would have

been obvious to one of ordinary skill in the art at the time the invention was made to

modify the Fischer ('717) PAI such that it includes a list of methods and their associated

object code offsets, as taught by Fischer ('072), so that the start of the object code of

the methods could be identified.

Allowable Subject Matter

13.   Subject to the 101 rejection, claims 10 would be allowable over the prior art if

rewritten in independent form including all of the limitations of the base claim and any

intervening claims.

14.   The following is a statement of reasons for the indication of allowable subject

matter. The present invention is directed to a stored manifest used to determine if an

application is allowed to execute on a computer system, the manifest includes one or

more export statements that allows a secret associated with the application to be

exported to another application. More specifically, dependent claim 10 identifies the

uniquely distinct feature: each export statement comprises an identifier of the manifest,

an identifier of the manifest that corresponds to the trusted application to which the

secret to be exported to, and a digital signature over both identifiers. The closest prior

art, Arnold (6,175,924), also discloses an application certificate that include an export

statement allowing protected data associated with one application to be exported to

other applications of the same family. However, Arnold does not teach that the export

statement comprises an identifier of the manifest, an identifier of the manifest that

corresponds to the trusted application to which the secret to be exported to, and a

digital signature over both identifiers. The prior art, taken either singly or in

combination, fails to anticipate or fairly suggest the limitations of applicant's

independent claim, in such a manner that a rejection under 35 U.S.C 102 or 103 would

be proper. The claimed invention is therefore considered to be in condition for

allowance as being novel and nonobvious over prior art.

Conclusion

15.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

U.S. Patent No. 5,978,484 to Apperson et al.

U.S. Patent No. 6,154,844 to Touboul et al.

U.S. Patent No. 6,253,323 to Cox et al.

U.S. Patent No. 6,463,535 to Drews

U.S. Patent No. 6,629,150 to Huded

U.S. Patent No. 6,766,353 to Lin et al.

U.S. Patent No. 6,910,128 to Skibbie et al.

U.S. Patent No. 6,915,433 to Barber

U.S. Patent Application Publication No. 2003/0056102 to Aho et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dinh whose telephone number is 571-272-3802. The examiner can normally be reached on Mon-Fri: 10:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).
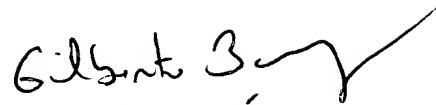
μD

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8/19/05

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